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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,255	06/27/2003	Belgacem Haba	SIPI-P107	8350
30554	7590	09/02/2004	EXAMINER	
SHEMWELL GREGORY & COURTNEY LLP 4880 STEVENS CREEK BOULEVARD SUITE 201 SAN JOSE, CA 95129			ZARROLI, MICHAEL C	
			ART UNIT	PAPER NUMBER
			2839	

DATE MAILED: 09/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/608,255	<b>Applicant(s)</b> HABA ET AL.	
	<b>Examiner</b> Michael C. Zarroli	<b>Art Unit</b> 2839	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Drawings*

1. The drawings submitted 6/27/03 are objected to because they appear informal. **Many of the drawings are difficult to read because they are too small and the reference numbers are unclear and written in free hand.**

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any

required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. Figures 9A & 9B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, all the biasing forces recited in for example claim 12 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. The examiner counts five different forces recited in claim 12!

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on

the immediate prior version of the sheet, even if only one figure is being amended.

The figure or figure number of an amended drawing should not be labeled as

“amended.” If a drawing figure is to be canceled, the appropriate figure must be

removed from the replacement sheet, and where necessary, the remaining figures

must be renumbered and appropriate changes made to the brief description of the

several views of the drawings for consistency. Additional replacement sheets may

be necessary to show the renumbering of the remaining figures. The replacement

sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR

1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner

does not accept the changes, the applicant will be notified and informed of any

required corrective action in the next Office action. The objection to the drawings

will not be held in abeyance.

### ***Claim Objections***

4. Claim 1 objected to because of the following informalities: In lines 5 and 6 the phrase “to at least partially defines.” Appropriate correction is required.

5. Claim 18 objected to because of the following informalities: The phrase “increase in skew” is grammatically wrong. Appropriate correction is required.

6. Claim 23 objected to because of the following informalities: Its inconsistent to recite a “first connector” but not a second. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

8. Claims 1-26 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. There are two different types of “elements” recited in the independent claims; “contact elements” and “discrete elements.” Yet, sometimes the applicant only recites “element” (e.g. line 14 claim 1 or claim 10 line 1). Unless the applicant specifically states contact elements the examiner will assume that the applicant is referring to the discrete elements (e.g. claim 7).

10. The term "corresponds" in claim 8 is a relative term, which renders the claim indefinite. The term "corresponds" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The examiner will interpret this claim to mean that the insertion force

causes abutment of mating component with the coupling structure. Claim 12 has the same exact sort of problem in line 3 and the term “coincides.” The examiner will interpret “coincides” to mean **occurs at the same time**.

11. In claims 12 and 22 the examiner is not sure to what “less skewed” is in relation too. The examiner will assume that the bias becoming less skewed means that it goes in a more vertical direction.

12. Claim 14 recites that the lever arms provide the force of insertion. The examiner does not see this, especially looking at the figures. The lever arms only seem to show that they only lock the mating component in place after it is inserted. The examiner will interpret as such.

### ***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1-13 (as best understood) rejected under 35 U.S.C. 102(b) as being anticipated by Pickles.

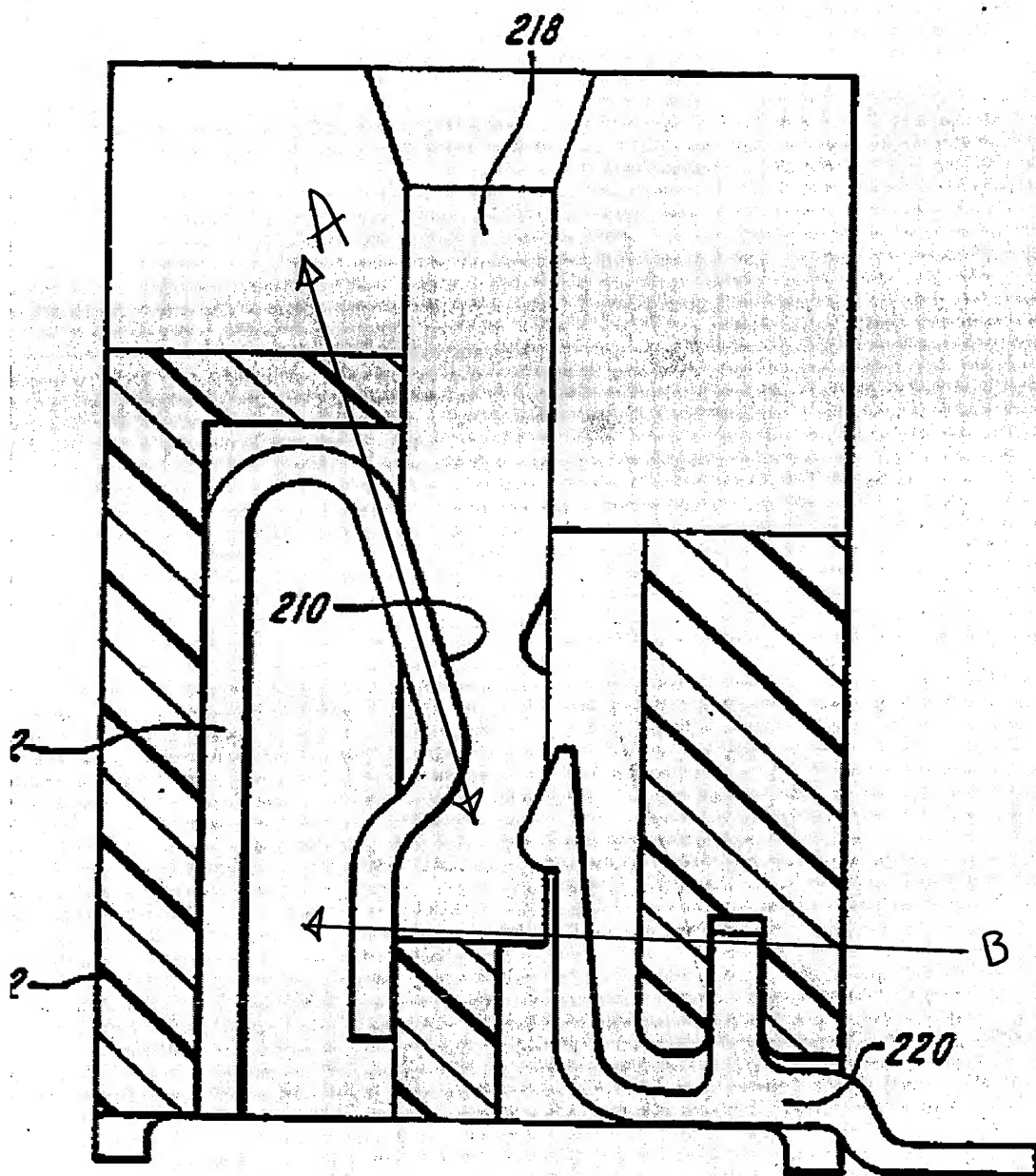
Pickles discloses a connector (title) comprising: a structure defining an interior cavity (46 or 218) for receiving a mating component; a plurality of electrical contact elements (220) provided adjacent to a first interior surface of the structure (fig. 12C); and a coupling structure (202, 210) disposed on at least a second interior surface to at least partially define a dimension of the cavity (fig. 12C), wherein the coupling structure is integrally formed from a combination that includes a plurality of discrete elements (figures 12D or 13A), the plurality of discrete elements being aligned to receive an insertion force that is provided to insert the mating component into the interior cavity (col. 2 lines 54-56), wherein the plurality of elements are structured so that in response to the insertion force affecting at least some of the plurality of elements, the affected elements are configured to move from an original state into a biased state (col. 7 line 68 to col. 8 line 2) and reduce an overall thickness of the coupling structure so as to increase the dimension of the cavity in a direction that is orthogonal to the insertion force (col. 8 lines 14-22); wherein each of the plurality of elements is structured so that, after being affected by the insertion force, each element is biased to tend towards (i) returning to the original state (fig. 12C) and (ii) cause an expansion of the coupling structure in a direction that decreases the dimension of the cavity (also fig. 12C).



Regarding claim 2 Pickles discloses that the couplings structure is structured so that the insertion force is distributed substantially uniformly to each of the affected elements in the plurality of elements (figures 12B, 12D or 13B).

Regarding claim 3 Pickles discloses that the coupling structure includes a matrix material in which the plurality of elements is disposed (figures 12C, 12E or 13B).

Regarding claims 4-5 and 10-11 Pickles discloses (see copy of fig. 12C from Pickles below) that before the insertion force is applied, the plurality of elements include a set of elements that have a first skewed orientation (arrow A below) with respect to a primary direction in which the insertion force is to be applied (218), and wherein the set of elements are aligned to increase in skew when affected by the insertion force and after the insertion force is applied (arrow B), the set of elements are biased to reduce in skew towards the first skewed orientation.



**FIG. 12C**

Regarding claims 6 and 7 Pickles discloses that the dimension of the cavity is sufficient for electrical contact elements provided on a front surface of the mating component (30 or 40) to be received within the cavity in a matable position relative to the plurality of electrical contact elements only **after the dimension of the cavity is increased** (in fig. 12C cavity 218 will be increased when force is applied in the B direction above). After the mating component is inserted and the affected elements are in the biased state, the plurality of elements is aligned so that the affected elements press against a back surface (fig. 7 side opposite 87) of the mating component so that an active force is provided to maintain the electrical contact elements (34) provided on the front side (fig. 5) of the mating component in contact with the plurality of electrical contact elements of the connector (fig. 7).

Regarding claim 8 Pickles discloses that the plurality of contact elements of the coupling structure is aligned so that the insertion force corresponds to the mating component contacting the coupling structure (figures 5 & 7).

Regarding claim 9 Pickles discloses that the first interior surface and the second interior surface oppose one another across the cavity (fig. 12C).

Regarding claim 12 Pickles discloses that the member of each element in the plurality of elements is configured to have a bias towards becoming less skewed (vertical direction in fig. 12C as outlined in the 112 rejection above) after the

insertion force is applied (also vertical) and the mating component is inserted (fig. 10A), and wherein the bias (more towards vertical) coincides with the coupling structure pressing against the mating component (fig. 7).

Regarding claim 13 Pickles discloses that the plurality of elements have a cantilever or leaf spring shape.

***Claim Rejections - 35 USC § 103***

15. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 14-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Pickles as applied to claim 1 above, and further in view of prior art figure 9A.

Pickles does not disclose pivoting lever arms that provide a force of insertion.

Prior art figure 9A discloses pivoting lever arms that provide an insertion force and, make contact with and are directed into the coupling structure on an edge surface of the coupling structure.

At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify Pickles with the lever arms of prior art figure 9A. The motivation for doing so eliminate the bulky insertion force providing lever arms that Pickles has mounted on the mating component.

***Allowable Subject Matter***

18. Claims 17 and 23 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

19. Claims 18-22 and, 24-26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

20. The following is a statement of reasons for the indication of allowable subject matter: The entire coupling structure formed from a matrix material.

***Conclusion***

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bricaud et al and Farnworth et al both teach a cavity with coupling structure and contacts.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Zarroli whose telephone number is 571-272-2101. The examiner can normally be reached on 7:30 to 3:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, T.C. Patel can be reached on (571) 272-2800 ext 39. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael C. Zarroli  
Primary Examiner  
Art Unit 2839

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